

3X RBA Best Practices

The following are provided to optimize your experience with the 3X RBA.

General Considerations

1. As with most computer equipment, we strongly suggest you use an Uninterruptable Power Supply to provide power to the Remote Backup Appliance.
2. Use a strong password for the Manager Web Interface –e.g. “!P4\$sWorD” vs. “password” and consider changing it on your regular password renewal schedule.
3. Backup data and client/vault communications are always transmitted using SSL encryption. Using on-disk encryption and/or compression will decrease performance to some degree. On disk compression is turned ON by default, on disk encryption is turned OFF by default.
4. Since version 2.0.4 of our system software, you have the ability to create a disaster recovery backup of the 3x vault backup data and settings to an external USB drive (“Vault Backup”).
5. Licensed storage – avoid allowing the available storage usage to get too close to 100%. Backups will not complete if the licensed capacity is exceeded. You will be notified by the system when the used storage gets above approximately 90%.

Backups – General Guidelines

1. Carefully consider what you are backing up and which folders or file types are included in your backup set rules. Only include folders with necessary data in your selection rules.
2. There is a “Preview” feature on the 3X Client, which will show exactly the files and folders that will be backed up with a given rule set. This can be saved or printed out for reference.
3. Be aware that folders or files with restrictive permissions may not backup as expected, use the Preview Feature described previously to confirm your rule selections. This is because the 3X agent uses the Windows “SYSTEM” account for access (the account used by the 3X agent can be altered if needed).
4. You can run the same backup set at different times with a different retention policy to accommodate your backup policy requirements. For example, you may run daily backups with a retention of two weeks. You might also run the same backup job once a month and keep those for a year (or more) if needed.
5. Create a separate backup set for System State if you are also backing it up. You can accomplish this by creating an “empty” backup job with no rules, but selecting the “System State” option for that job. An integrated System State backup option for Server 2008 is not currently supported, as of system software version 2.1.6.

6. When creating a schedule, give it a descriptive name (“Weekdays at 11:30pm”) so it can readily be reused if needed. Once created, a new schedule will then be available from the drop down menu in the job creation task.
7. If you are using MS SQLs own backup feature to create a daily file to be backed up by the 3X RBA, use the same filename for the file each time. Otherwise, the RBA will not transmit just the smaller “delta” file change, but will need to retransmit the whole new daily backup file. You still have the ability to restore the entire file from any daily backup.
8. **Both “Schedule” and “Retention” policies are global** – meaning if you edit an existing retention or schedule that has already been applied to other backup jobs, those jobs will also be affected by the change you just made.
9. **“Rule Sets” are not global.** If you create and share a rule set using the “Make Available To Others” option, it becomes a template that can be imported to create another backup job later. The imported rules can be edited without affecting the original shared rule set template. This is by design, so you can create a generic rule set that can be imported and “tweaked” as needed.

Backups - Performance

1. Backups can be most effectively carried out when bandwidth is most available, and where the computer being backed up is under least use. You should install the 3x client to a drive that has at least 1GB of free space.
2. Break up your backup sets by creating separate backup sets for each drive in a multi-drive system for example. This is more efficient and easier to administer and troubleshoot.
3. Backup sets with large numbers of files/folders (over 400,000 items in one backup set) can take longer than expected to run. Best practice is to restrict individual backup sets to less than 400,000 files/folders if possible. Splitting up such sets will invariably result in faster overall backups, as the file analysis process will be more efficient.
4. Avoid using the same schedule for all backup jobs. For example, if you have 25 backup jobs per day starting at 10pm, consider grouping them so five jobs start at 9pm, five at 9:30pm, five at 10pm and so on.
5. The System Maintenance runs daily at midnight by default. If most of your backup jobs are scheduled around this time, you can reschedule Maintenance to run later (or earlier), as it can have a performance impact if it needs to run for an extended period during backups.
6. Perform the first (“seed”) backup on the same network as the device(s) being backed up if at all possible. This will provide the best speed advantage. If you anticipate backing up a lot of data at once (100GB+), you may consider creating your seed on the weekend.
7. Since version 2.0.4 of the 3x system software, you can also create the seed backup to a USB drive attached to the computer being backed up. This can then be imported into the 3x vault, and thereafter the scheduled backups will run. This means that the 3x vault itself can remain at the remote location. This is generally a slower process than if the

vault was on the local LAN, but much faster and more practical than a seed across the Internet.

8. Use filtering to exclude Temporary folders or other junk folders from being backed up. Here are some examples you can exclude in globally in a backup set (see “Rule Based Backup Set” doc for specifics) :
 - a. Exclude (full path match) “**\temp**” Use this filter on the root of your drive selection such as C:\ to exclude any path with a folder name “temp”. e.g. C:\temp\ or C:\windows\temp\.
 - b. Exclude (full path match) “**\temporary Internet***” Use this filter on the root of your drive selection such as C:\ to exclude potentially thousands of temporary browser files.
 - c. Similarly, exclude (full path match) “**\cookies**” to exclude any cookie files.
 - d. Exclude unnecessary files such as *.tmp from your backup sets.
 - e. Explicitly exclude folders such as “Recycler”, “System Volume Information” from your backup set to avoid backing unnecessary files.
 - f. If you are backing up Windows Operating System files, pay close attention to making sure that you backup only necessary files needed if you system is rebuilt.
9. Note that if you make a change to a backup set selection rules, the system has to perform a baseline backup. This is expected behavior. Although a baseline backup does NOT retransmit the file already backed up to the appliance, this process could be time consuming as it has to traverse your file system to update the snapshot set information.
10. If you are backing up folders where a lot of data changes each day, these can take longer as you lose some of the benefit of de-duplication. After creating a seed backup, examine subsequent backups to see how long they run so you can better manage your backup schedules.